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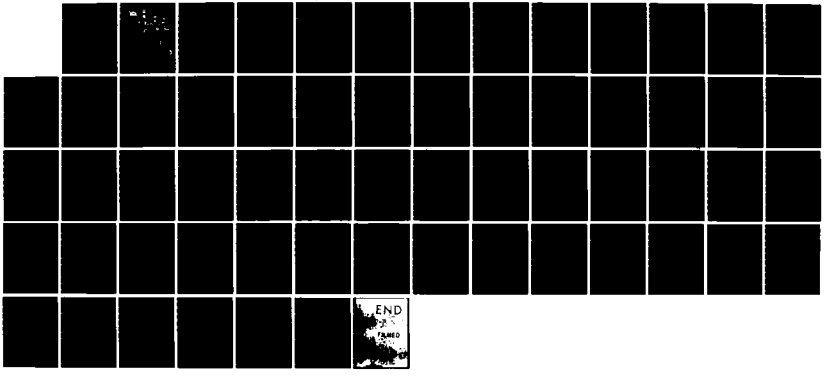

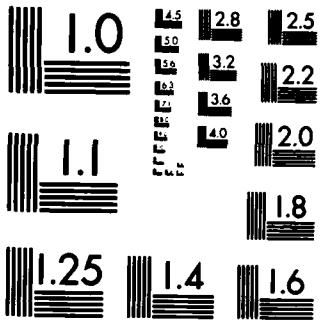

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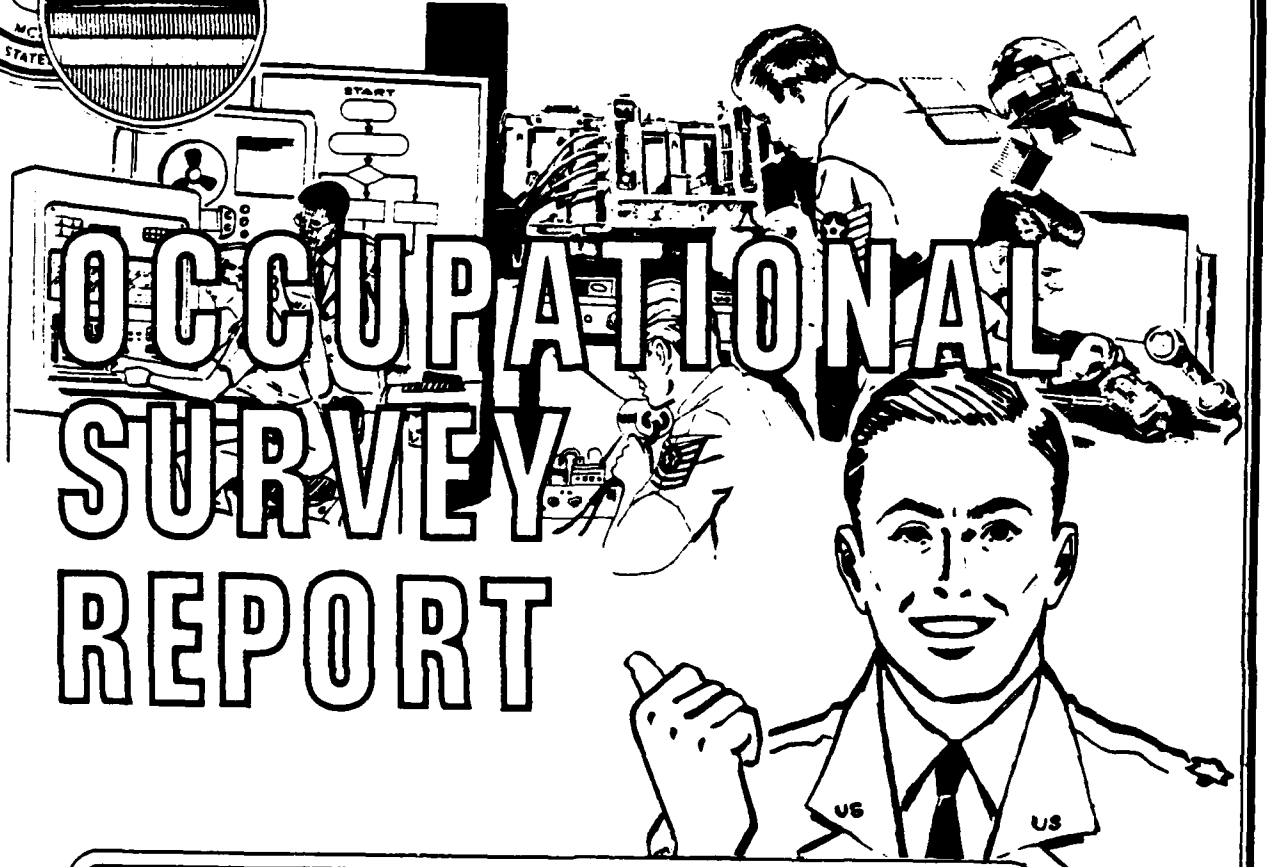

OCCUPATIONAL SURVEY REPORT

COMMUNICATIONS-ELECTRONICS UTILIZATION FIELD

AFSC 30XX

AFPT 90-30X-467

AUGUST 1984

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OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150

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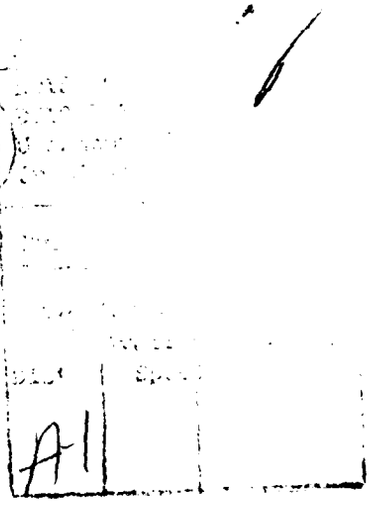

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PREFACE

This report presents the results of a detailed Air Force occupational survey of the five specialties within the Communications-Electronics utilization field (AFSCs 301X, 302X, 303X, 305X, and 309X). The project was initiated at the request of the Assistant Chief of Staff for Information Systems (AF/SI) for use in making decisions concerning classification, training, and personnel utilization issues. Authority for conducting occupational surveys is contained in AFR 35-2.

The occupational survey program within the Air Force has been in existence since 1956, when initial research was undertaken by the Air Force Human Resources Laboratory to develop a methodology for conducting occupational surveys. Computer programs for analyzing the occupational data were designed by Dr R. E. Christal, Manpower and Personnel Division, AF Human Resources Laboratory, and were written by the Computer Programming Branch, Technical Services Division, AFHRL.

The survey instrument, USAF Job Inventory AFPT 90-30X-467, was developed by Captain William Wimpee. The survey data were analyzed and the report prepared by Mr J. S. Tartell, Lieutenant William Roberts, and Lieutenant Mary Thomasson, with the assistance of Sergeant Ray Tackett. This report has been reviewed and approved.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel (see distribution list). Additional copies are available upon request to the USAF Occupational Measurement Center, Attention of the Chief, Occupational Analysis Branch (OMY), Randolph Air Force Base, Texas 78150.

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OCCUPATIONAL SURVEY REPORT
COMMUNICATIONS-ELECTRONICS OFFICER UTILIZATION FIELD
(AFSC 30XX)

INTRODUCTION

The Communications-Electronics Officer utilization field is composed of five specialties, AFSC 301X, 302X, 303X, 305X, and 309X. The occupational survey data were collected and analyzed to satisfy two objectives: first, to identify jobs and tasks performed; and second, to determine the basis for training future Communications-Electronics Officers.

History and Background

The current Communications-Electronics utilization field was formed in 1954 from four specialties, the ECM Officer (AFS 3024), the Communications Officer (AFS 3034), the Ground Electronics Officer (AFS 3044), and the C-E Staff Officer (AFS 3016). In 1970, the field was expanded through the addition of the C-E Director specialty (AFS 3096), the Electronics Systems Officer, Staff (AFS 3076), and the Communications-Electronics Engineer (AFS 3055). Also, in 1970 the titles of the specialties were revised to Communications Systems Officers (AFS 3024), Communications Maintenance Officers (AFS 3034), and Electronics Systems Officers (AFS 3044). In 1981, the classification structure was modified to the present form, as shown below:

Communications-Electronics Systems Staff Officer (AFSC 3016)
Communications-Electronics Systems Officer (AFSC 3024)
Communications-Electronics Maintenance Officer (AFSC 3034)
Communications-Electronics Engineer (AFSC 3055)
Communications-Electronics Director (AFSC 3096)

In the utilization field there are two ATC entry-level resident technical training courses. Listed below are the course titles, location, and length of these courses:

Communications-Electronics Systems Officer Course, E30BR3021, Keesler Technical Training Center, 1,096 hours
Communications-Electronics Engineer (SATP), E30BR3051, Keesler Technical Training Center, 222 hours

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SURVEY METHODOLOGY

The survey instrument used to collect data for this occupational survey was USAF Job Inventory AFPT 90-30X-467, dated July 1983. The job inventory was developed between July 1982 and March 1983, based on interviews with 261 officers at 14 locations. The survey instrument was validated in March 1983 at a workshop of Communications-Electronics Officers representing the Air Staff, MAJCOMs, and separate operating agencies (SOA). The job inventory was composed of two sections. The first was a background section used to collect personal information such as name, grade, time-in-service, and job interest. The second section was a task list, a collection of 1,509 task statements, related to all aspects of the Communications-Electronics utilization field.

Survey Population

The officers included in this survey were selected from the Uniform Officer Record file for July 1983. To be included, officers had to be assigned to their present duty position for at least 60 days; not programmed for PCS, retirement, or discharge for at least 90 days; and possess one of the Communications-Electronics duty AFSCs. From a total of 3,441 officers authorized, 2,656 met the criteria for inclusion in the survey sample. Completed job inventories were received from 1,946 personnel for a return rate of 73 percent, representing 57 percent of the utilization field strength.

Tables 1, 2, and 3 compare the characteristics of the survey sample with the population characteristics of the utilization field. In all instances, the survey sample is representative of the population and is adequate to allow for valid inferences from the data.

TABLE 1

DISTRIBUTION BY MAJOR COMMAND

MAJCOM	PERCENT OF ASSIGNED (N=3,441)	PERCENT OF SAMPLE (N=1,946)
AFCC	60	62
TAC	6	5
AFSC	4	4
ATC	4	2
ESC	4	4
SAC	2	1
USAFE	2	2
OTHER	18	20

TABLE 2

DISTRIBUTION BY GRADE

PAYGRADE	PERCENT OF ASSIGNED (N=3,441)	PERCENT OF SAMPLE (N=1,946)
COLONEL	4	5
LIEUTENANT COLONEL	13	14
MAJOR	16	17
CAPTAIN	29	30
LIEUTENANT	38	34

TABLE 3

DISTRIBUTION BY SPECIALTY

DUTY AFSC	PERCENT OF ASSIGNED (N=3,441)	PERCENT OF SAMPLE (N=1,946)
301X	30	28
302X	28	28
303X	18	18
305X	17	17
309X	7	9

Training Emphasis Data Collection

In addition to completing the job inventory, a selected sample of Communications-Electronics Officers were asked to complete a second book containing the same tasks as the job inventory. These officers were asked to rate tasks on the training emphasis that should be placed on them, using the 10-point scale shown below:

RATING SCALE	TRAINING EMPHASIS RECOMMENDED
0	No Structured Training Needed
1	Extremely Low Training Emphasis
2	Very Low Training Emphasis
3	Low Training Emphasis
4	Below Average Training Emphasis
5	Average Training Emphasis
6	Above Average Training Emphasis
7	High Training Emphasis
8	Very High Training Emphasis
9	Extremely High Training Emphasis

Ratings were given for those tasks raters felt required some form of structured training for entry-level personnel. Structured training is defined as training provided by resident technical school, field training detachments, or formal OJT. Training emphasis ratings were collected from 148 experienced Communications-Electronics Officers across the specialties.

Data Analysis

Time Spent Ratings. As a first step in the analysis of occupational survey data, each respondent's time-spent ratings were converted to percent-of-time ratings. To accomplish this conversion, all of an individual's relative-time-spent ratings were summed, with the total representing all of the individual's job. The ratings were made by survey respondents on each of the tasks they performed in their present jobs, using the following time spent scale:

RATING SCALE	AMOUNT OF TIME SPENT
1	Very Small Amount
2	Much Below Average
3	Below Average
4	Slightly below Average
5	About Average
6	Slightly Above Average
7	Above Average
8	Much Above Average
9	Very Large Amount

Each separate task rating was then divided by the total and the quotient multiplied by 100 to provide the relative-percent-time ratings for each task.

For the purpose of organizing individual jobs into similar types of work, an automated job clustering program was used. This hierarchical grouping program is a basic part of the Comprehensive Occupational Data Analysis Program (CODAP) package for job analysis. Each individual job description in the sample was compared to every other job description in terms of the relative amount of time spent on each task in the job inventory. On the first iteration, the clustering program is designed to locate the two job descriptions with the most similar ratings. These two job descriptions are combined to form a composite. In successive stages, individual job descriptions of other respondents were added to the original composite or new groups were formed, based only on the similarities in tasks performed and time spent. This procedure was continued until all individuals and groups were combined to form a single composite representing the total survey sample.

The analysis of the clustering data allowed the identification of: (a) the number and characteristics of the different jobs which existed within the Communications-Electronics Officer utilization field; (b) the tasks which tended to be performed together by the same respondents; and (c) task and incumbent characteristics which may be peculiar to specific functional requirements as they existed at the time of the survey.

Training Emphasis Ratings. The training emphasis ratings were divided into three sets, one for the Systems Officers, one for the Maintenance Officers, and one for the Engineers. The interrater reliability within the Systems and Maintenance Officer sets was marginal but showed some agreement among raters as to which tasks require some form of structured training. The ratings provided by the Engineers did not result in high enough interrater

agreement to allow conclusions to be drawn regarding which tasks were recommended for structured training. The inability of the Engineers to agree what tasks require some form of structured training indicates that cost-effective and job-related training programs for all entry-level Engineers may be impossible to design.

JOB STRUCTURE ANALYSIS

Overview

For the Communications-Electronics Officer utilization field, 1,946 individual job descriptions were compared to identify the field structure of jobs. The analysis identified 34 groups of jobs. Table 4 lists the groups of jobs and the percentages of the total sample represented in each. Table 5 reflects the percentage of job time expended by the members of each job group performing tasks in each of the job inventory duties.

An early impression gathered from the job data to this point was the wide variety of jobs performed by Communications-Electronics Officers. An indicator of this variety of jobs is the small number and type of tasks performed by substantial percentages of all respondents. There were only six tasks performed by as many as two-thirds of the total sample. The six tasks are listed below:

Draft or write correspondence, such as letters or messages
Prepare formal or informal briefings
Present formal or informal briefings
Review or proofread correspondence, such as letters, messages, talking papers, or staff studies
Advise on or interpret publications, procedures, or policies
Review read files

These tasks appear to be applicable to any job.

Job Group Descriptions

This section of the narrative provides details about each of the job groups identified during the structural analysis. The information will generally be limited to a brief description of the individuals who make up the job and some of the tasks which illustrate the nature of the job. For some of the larger job groups, an outline of the jobs that were grouped together to form the larger group will be provided. The order in which the jobs will be presented is a result of the hierarchical clustering analysis program and the only importance that can be attached to the ordering was that case control number 0001 happened to be completed by an individual performing a communications requirements job.

COMMUNICATIONS REQUIREMENTS OFFICERS (GPO602). The survey respondents in the Communications Requirements job group represent 3 percent of the survey sample. Duty AFSCs of these incumbents are AFSC 3016 (35 percent), AFSC 3024 (24 percent), and AFSC 3096 (24 percent). Of the

TABLE 4

JOBS IDENTIFIED FROM JOB STRUCTURE ANALYSIS

TITLE	PERCENT OF SAMPLE
MANAGERS	10
PLANS AND PROGRAMS SPECIALISTS	9
ACQUISITION AND CONTRACTING MONITORS	8
CONTINGENCY, EXERCISE, AND MOBILITY MANAGERS	7
CHIEFS OF MAINTENANCE-LOGISTICS	4
COMMANDERS	4
SYSTEMS ANALYSTS	4
COMMUNICATIONS REQUIREMENTS OFFICERS	3
IG INSPECTORS	3
TELECOMMUNICATIONS OPERATIONS OFFICERS	3
COMMUNICATIONS-ELECTRONICS MANAGERS	2
MAINTENANCE STAFF OFFICERS	2
SENIOR PLANS AND PROGRAMS OFFICERS	2
PROJECT OR SITE ENGINEERS	2
STAFF ASSISTANCE VISIT (SAV) SPECIALISTS	2
SECURITY MANAGERS	2
STAFF OFFICERS	2
COMMUNICATIONS-ELECTRONICS SECURITY INSPECTORS	1
CONTRACT MANAGERS	1
INSTRUCTORS	1
DEPLOYMENT STAFF OFFICERS	1
TESTING AND EVALUATION OFFICERS	1
AIRBORNE TEAM CHIEFS	*
BUDGET SPECIALISTS	*
COMMAND POST CONTROLLERS	*
COMMERCIAL LIAISON SPECIALISTS	*
COMMUNICATIONS SECURITY REQUIREMENTS OFFICERS	*
INSPECTORS	*
LEASED LINE MANAGEMENT SPECIALISTS	*
LOGISTICS SUPPORT STAFF OFFICERS	*
MAINTENANCE CHIEFS-PROGRAM MANAGEMENT	*
MAINTENANCE CHIEFS-UNIT SELF-INSPECTION	*
SUPERVISORS	*
TACTICAL COMMUNICATION ENGINEERS	*

* Less than 1 percent

incumbents, 26 percent have duty AFSC prefix A. They perform an average of 445 tasks, are very satisfied with their jobs, and are primarily assigned to AFCC (62 percent). The tasks listed below reflect the job performed by the Communications Requirements job group:

Coordinate with users on communications requirements
Advise commander or higher headquarters personnel on operational status or mission impact matters
Interpret user communications requirements
Identify current trends that affect future communications
Arrange for communications support for exercises

COMMANDERS (GPO780). This job group represents 4 percent of the survey sample. Many (44 percent) of these incumbents hold duty AFSC 3016, with 37 percent having duty AFSC prefix A. These respondents are primarily assigned to AFCC (88 percent), very satisfied with their jobs, and perform an average of 220 tasks. Tasks illustrative of the type of job performed are as follows:

Establish organizational policies, operating instructions (OI), or standing operating procedures (SOP)
Provide guidance on C-E matters, such as capabilities, limitations, or requirements
Coordinate with personnel agencies on manning actions, authorizations, or requirements
Plan or develop unit programs, such as safety, suggestion, or people programs
Review personnel records

CHIEFS OF MAINTENANCE-LOGISTICS (GPO962). This job group represents 4 percent of the survey sample. Most (76 percent) incumbents are assigned to AFCC and have either duty AFSC 3016 (33 percent) or duty AFSC 3034 (49 percent). Sense of accomplishment is generally high, and these respondents perform an average of 249 tasks. Officers in the Chief of Maintenance-Logistics job group spend a substantial amount of time (26 percent) performing logistics duties. The following tasks are representative of this type of job:

Manage maintenance activities for ground C-E systems
Coordinate with work center supervisors on management or personnel matters
Conduct maintenance meetings
Evaluate maintenance QC inspection reports
Resolve maintenance conflicts, such as scheduling, priority restoral, or distribution of resources

COMMERCIAL LIAISON SPECIALISTS (GPO571). This is a very small job group, with respondents assigned to only 3 commands: AFCC (40 percent), DCA (40 percent), or Space Command (20 percent). The duty AFSC 3096 represents 40 percent of this group. Most of the members feel a sense of accomplishment from their work, but do not feel their talents are well utilized. An average of 188 tasks are performed and the following tasks reflect the type of job performed:

Coordinate services with commercial carriers
Act as liaison with long-line carriers and local service representatives
Analyze data network outages or traffic flow
Analyze voice network outages or traffic flow
Provide very important person (VIP) communications support

INSPECTORS (GPO480). Representing a very small percentage of the survey sample, Inspectors hold duty AFSC 3034 (57 percent) and most are assigned to TAC (29 percent) or AFCC (29 percent). Members of this group are satisfied with their work, feel their talents are well utilized, but do not feel the job utilizes their training very well. They perform an average of 211 tasks, represented by the following:

Draft or write inputs to inspection or evaluation reports
Track inspection or evaluation open items
Develop inspection or evaluation checklists, standards, or criteria
Coordinate with commander or headquarters personnel on corrective actions to inspection or evaluation reports
Evaluate adequacy of corrective actions to inspection or evaluation reports

COMMUNICATIONS-ELECTRONICS SECURITY INSPECTORS (GPO579). The Security Inspectors job group represents only 1 percent of the survey sample. Almost all (80 percent) are assigned to AFCC and 75 percent hold duty AFSC 3024. This job group was less satisfied with their work than other groups and felt both talent and training were not well utilized. They performed an average of 105 tasks and the following tasks represent the type of work performed:

Inspect communications security (COMSEC) accounts or subaccounts
Maintain self-inspection books, guides, or checklists
Advise commanders on possible security compromise procedures
Package or inspect classified materials for shipment
Prepare emergency plans for protection, removal, or destruction of classified materials

TELECOMMUNICATIONS OPERATIONS OFFICERS (GPO649). Members of this job group represent 3 percent of the survey sample. Almost all (92 percent) respondents of this job group are assigned to AFCC. The largest portion (78 percent) hold duty AFSC 3024. They are generally satisfied with the job and feel their talents are being well utilized, but do not feel the job is utilizing their training very well. An average of 175 tasks are performed by this job group, with the following tasks representing the type of work performed:

Counsel personnel on personal or military-related matters
Coordinate with users on communications requirements
Manage telecommunications center operations
Draft or write letters of appreciation or reprimand
Investigate or resolve customer service complaints

COMMUNICATIONS SECURITY REQUIREMENTS OFFICERS (GPO734). The survey respondents of this very small group are assigned to AFCC (50 percent), Space Command (38 percent), and USAFE (12 percent). Most (75 percent) hold duty AFSC 3024 and find their jobs interesting and satisfying. A relatively large number of the respondents feel their talents and training are not well utilized. With an average of 208 tasks performed in this job, the following tasks are representative of the job performed:

Maintain COMSEC accounts
Determine COMSEC requirements for systems, subsystems, facilities, or equipment
Participate in exercise planning meetings
Develop COMSEC requirements lists
Draft or write customer education handbooks, pamphlets, or guides

MAINTENANCE STAFF OFFICERS (GPO371). This job group represents 2 percent of the survey sample. The largest number of the respondents (69 percent) are assigned to AFCC and 62 percent hold duty AFSC 3034. Their jobs are interesting, utilize both talent and training well, and provide them with a sense of accomplishment. An average of 122 tasks are performed, with the tasks below representing this job:

Determine impact of equipment outages on mission
Manage maintenance activities for ground C-E systems
Draft or write maintenance operating instructions (MOI)
Coordinate with appropriate agencies or personnel on maintenance matters, such as equipment or power outages
Conduct maintenance meetings

DEPLOYMENT STAFF OFFICERS (GPO377). The Deployment Staff job group is small, with 57 percent of the respondents being assigned to AFCC, 18 percent to TAC, and 14 percent to USAFE. These incumbents did not feel their talents and training were well utilized. They perform an average of 151 tasks. Half of these survey respondents hold duty AFSC 3034 and the following tasks display the type of job performed:

Supervise or participate in set-up or phase down of equipment at tactical, exercise, or deployed sites
Select personnel for deployment
Participate in operational exercises
Advise subordinates on exercise or deployment responsibilities or procedures
Participate in exercise planning meetings

STAFF ASSISTANCE VISIT (SAV) SPECIALISTS (GPO387). The SAV Specialist job group represents 2 percent of the survey sample. These respondents hold several duty AFSCs (27 percent with DAFSC 3016, 18 percent with DAFSC 3024, and 15 percent with DAFSC 3011). AFCC accounts for 58 percent of the assigned respondents, with AFTAC and TAC accounting for 12 percent each. While these incumbents feel their training and talents are not well utilized, they have a high sense of accomplishment and interest in their job. They perform an average of 85 tasks including:

Conduct SAVs
Draft or write inputs to SAV reports
Coordinate with commander or headquarters personnel on management actions to SAV reports
Brief personnel on SAV findings
Conduct follow-up on SAV report observations

MANAGERS (GPO403). The management cluster consists of four jobs, which represent 10 percent of the survey sample. The jobs forming this cluster are:

HQ Directors and DCS
Communications Squadron and Group Commanders
Division and Branch Chiefs
EIG Division and Branch Chiefs

These respondents hold several duty AFSCs including DAFSC 3016 (33 percent) and DAFSC 3096 (29 percent). Most (76 percent) are assigned to AFCC, with duty AFSC prefix A. Review of job satisfaction indicators show these respondents having higher than average job interest, utilization of talent, and sense of accomplishment gained from work.

A substantial portion of these respondents' time is spent performing tasks related to command, supervision, personnel actions, and resource management. The tasks listed below illustrate the type of job performed by the personnel in the management cluster:

Review or evaluate command goals or objectives
Coordinate with personnel in on- and off-base gencies for help in resolving subordinates problems
Draft or write officer effectiveness reports (OER)
Allocate personnel resources
Coordinate with personnel agencies on manning actions, authorizations, or requirements

SENIOR PLANS AND PROGRAMS OFFICERS (GPO418). This job group accounts for 2 percent of the survey sample. Most respondents (54 percent) are assigned to AFCC, 12 percent to DCA, and 10 percent to ELM. The majority of these officers hold DAFSC 3096 (46 percent) or DAFSC 3016 (29 percent). Job interest, talent utilization, and satisfaction gained from work are higher than average for these incumbents. They perform an average of 131 tasks and the type of job performed is represented by the tasks listed below:

Evaluate program objective memoranda (POM) inputs
Interpret user communications requirements
Monitor C-E program implementations
Develop inputs to architectural concepts for command and control, communications, computer, or intelligence
Monitor status of program objective memoranda (POM) initiatives

LEASED LINE MANAGEMENT SPECIALISTS (GPO356). This is a very small job group performing an average of 79 tasks. The majority of respondents (63 percent) are assigned to AFCC, with 25 percent to DCA and 13 percent to AFLC. Utilization of talents and training are lower than average, but job interest is fairly high. The following tasks describe this type of job:

Review TSRs or RFSs
Coordinate with users on communications requirements
Process requests for leased services or facilities
Verify Telecommunications Service Requests (TSR) or Requests for Service (RFS)
Coordinate with legal personnel or contracting officers on technical aspects of contracts, bids, or proposals

MAINTENANCE CHIEFS-PROGRAM MANAGEMENT (GPO315). The Maintenance Chiefs job group is very small, with these respondents performing an average of 101 tasks. Many of these personnel hold duty AFSC 3016 (44 percent) or duty AFSC 3034 (22 percent). The largest portion of these incumbents are assigned to AFCC (67 percent). Members of the Maintenance Chief job group realize higher than average satisfaction from their work and perceive their talents and training are well utilized. The tasks below represent the jobs performed by the Maintenance Chief job group:

Monitor logistic support planning
Evaluate operations or maintenance concepts
Review outage reports
Develop maintenance concepts
Conduct or participate in logistics management conferences

SUPERVISORS (GPO291). The Supervisor job group respondents are a small job group with respondents holding many AFSCs. Many (21 percent) have duty AFSC prefix C, most are assigned to AFCC and feel their talents and training are not well utilized, but are satisfied with accomplishment from work. An average of 61 tasks are performed, with the listed tasks representing this job:

Indorse or review APRs, OERs, or civilian appraisals
Counsel personnel on personal or military-related matters
Allocate personnel and resources
Schedule work assignments
Coordinate with personnel agencies on manning actions, authorizations, or requirements

MAINTENANCE CHIEFS-UNIT SELF-INSPECTION (GPO406). This very small job group has respondents in AFCC (33 percent), TAC (33 percent), SAC (17 percent), and USAFE (17 percent). They hold several duty AFSCs including DAFSC 3011 and DAFSC 3096 (33 percent each). Perceived utilization of talents and training is higher than average, as well as the sense of accomplishment received from their work. The members of this job group perform an average of 93 tasks in the job as represented below:

Determine impact of equipment outages on mission
Review outage reports
Evaluate requests for emergency maintenance assistance
Advise unit commander on equipment status reports (ESR)
Follow-up on failure of critical ground C-E components

CONTINGENCY, EXERCISE, AND MOBILITY MANAGERS (GPO155). This cluster is comprised of four jobs representing 7 percent of the survey sample. The jobs are:

Operations
Exercise/Contingency Plans
Systems Analyst
HQ Exercise/Contingency Plans AFCC

These respondents hold a wide variety of duty AFSCs and prefixes, with 64 percent of them being assigned to AFCC. Utilization of talent and training is average, with sense of accomplishment gained from work being fairly high. They perform an average of 126 tasks and the jobs are described by the tasks below:

Coordinate with users on communications requirements
Participate in exercise planning meetings
Review war or contingency plans or annexes, concept plans, or operations orders
Draft or write C-E annexes for plans
Coordinate with participating units on exercise requirements

SECURITY MANAGERS (GPO128). This job group represents 2 percent of the survey sample and the respondents perform an average of 93 tasks. AFCC is assigned 74 percent of the incumbents and most of them hold DAFSC 302X (84 percent). Utilization of training is fairly low, while job interest and sense of accomplishment are fairly high for these personnel. The following tasks display the type of job performed by the respondents in this job group:

Maintain classified safes or cabinets
Conduct security training, such as communications security (COMSEC) or operations security (OPSEC) training
Monitor security programs, such as OPSEC, COMSEC, CSEP, or physical security programs
Brief or debrief personnel on security procedures
Destroy or witness destruction of classified material

COMMUNICATIONS-ELECTRONICS MANAGERS (GPO107). This job group represents 2 percent of the survey sample. Respondents perform an average of 45 tasks. The major command having the largest part of incumbents assigned is AFCC, with 56 percent. A wide variety of AFSCs are held by the incumbents, with 6 percent having duty AFSC prefix C. Utilization of training and the sense of accomplishment gained from work are lower than average for these respondents. The tasks below reflect the type of job performed:

Approve or disapprove correspondence, such as letters, messages, talking papers, or staff studies
Assign projects to personnel for staffing actions
Review read files
Indorse or review APRs, OERs, or civilian appraisals
Allocate personnel resources

ACQUISITION AND CONTRACTING MONITORS (GPO098). This is a cluster of three jobs representing 8 percent of the survey sample. The respondents belonging in this cluster perform an average of 176 tasks. The majority (57 percent) are assigned to AFCC and hold a variety of AFSCs (with 11 percent having prefix C). Job interest and utilization of talents are high, while training utilization is relatively low. The following jobs combine to form this cluster:

HQ Contracting/Logistics Commanders
Acquisition and Contracting Developers
Planning and Programming Support Managers

The tasks listed below represent the type of job performed by incumbents in this cluster:

Coordinate with agencies or personnel on installation matters, such as milestones, progress reports, or slippages
Monitor C-E program implementations
Maintain or update program or project folders
Review Statements of Work (SOW) for programs or projects
Coordinate with agencies or personnel on program matters, such as schedule changes, funding, or changes to documents

IG INSPECTORS (GPO086). The Inspectors job group accounts for 3 percent of the survey sample. The incumbents perform an average of 81 tasks and most are assigned to AFCC (73 percent). Respondents hold many AFSCs and do not usually have a DAFSC prefix. While incumbents have a fairly high sense of accomplishment gained from their work, their perceived utilization of training is lower than average. The job is interesting to them and they feel that their talents are well utilized. The following tasks represent the Inspector job group:

Draft or write inputs to inspection or evaluation reports
Brief personnel on inspection or evaluation findings
Conduct formal inspections, such as Inspector General (IG) inspections
Determine composition of inspection or evaluation teams
Determine areas to evaluate or inspect

PLANS AND PROGRAMS SPECIALISTS (GPO156). The Plans and Programs job group represents 9 percent of the survey sample. Utilization of talent and training are below average, while job interest and satisfaction are high. These incumbents are assigned to many MAJCOMs, with 41 percent in AFCC. Several respondents (21 percent) are assigned to HQ USAF. Of these incumbents, 14 percent have duty AFSC prefix C. The members of this job group perform an average of 72 tasks and the type of job performed is displayed below:

Draft or write inputs to RFP items, such as CDRLs, SOWs, DIDs, CLINs, or PSWs
Develop inputs to FYPs or FYDPs
Coordinate with agencies or personnel on installation matters, such as milestones, progress reports, or slippages
Track schemes
Conduct program management meetings or working groups

STAFF OFFICERS (GPO166). This job group represents 2 percent of the survey sample. The incumbents from this job group perform an average of 38 tasks and hold many AFSCs (35 percent are AFSC 3016). One-half are assigned to AFCC. Perception of talent utilization is low, and respondents indicated that utilization of their training is extremely low. Job interest and satisfaction are average for this utilization field. The average time spent by all members performing command, management, and advisory tasks is very high. Tasks listed below reflect the type of job performed:

Coordinate with appropriate agencies or personnel on publications, procedures, or policies
Consolidate inputs to publications, procedures, or policies
Research or respond to inquiries from Government agencies, field activities, higher headquarters, or Congress
Coordinate with other commands or Government for assistance on C-E programs
Coordinate with appropriate agencies or personnel on joint programs

LOGISTICS SUPPORT STAFF OFFICERS (GPO161). This is a very small job group, with its respondents performing an average of 68 tasks. They are assigned to several MAJCOMs, with AFCC, AFLC, and TAC each having 17 percent. These incumbents are divided among several duty AFSCs, with DAFSC 3096 and 3016 or DAFSC 3031 each held by 25 percent. The sense of accomplishment gained from work and utilization of talents are low, while job interest remains average. Respondents feel their utilization of training is very low. The list of tasks below describe the type of job performed by the Logistics Support Staff:

Participate in program management meetings or working groups
Monitor logistic support planning
Develop inputs to program support plans, such as ILSPs, supply support, or facilities plans
Participate in logistics support analysis reviews
Evaluate ECPs or ECRs

BUDGET SPECIALISTS (GRP077). The Budget Specialists job group is a very small group, with respondents performing an average of 66 tasks. Personnel hold several AFSCs, most holding DAFSC 302X (54 percent). AFCC and ESC are the commands with the most representation in the budget job group (36 percent each). Job interest and utilization of training and talent are lower than average. The following tasks display the type of job performed by incumbents in this job group:

Develop budgets, budget guidelines, or budget estimates
Allocate or distribute operation and maintenance (O&M) funds
Monitor expenditures of unit funds or resources
Adjust budgets for unprogrammed requirements
Approve or disapprove expenditure of funds, such as for equipment O&M or equipment installation

TESTING AND EVALUATION OFFICERS (GPO393). This small job group represents 1 percent of the survey sample. These respondents perform an average of 169 tasks and most hold AFSC 3055 (59 percent). Eighteen percent of the incumbents have duty AFSC prefix A and 9 percent have the C prefix. These officers have higher job interest, talent and training utilization, and satisfaction than average. The tasks listed are a representation of the job performed by these officers:

Develop inputs to test plans, procedures, or criteria
Develop test plans, procedures, or criteria
Review final test reports
Coordinate with appropriate agencies or personnel on development of test plans
Coordinate with appropriate agencies or personnel on test results

INSTRUCTORS (GPO083). The Instructor job group is 1 percent of the survey sample and respondents perform an average of 51 tasks. They hold several AFSCs and 50 percent have duty AFSC prefix T. They are primarily assigned to ATC (47 percent) and AFCC (21 percent). Both job interest and satisfaction are high, with the incumbents feeling their talents are more utilized than average. The following tasks reflect the job performed by Instructor personnel:

Develop training aids, handouts, or materials
Conduct formal or resident course classroom training
Draft or write inputs to course control documents, course materials, or lesson plans
Develop training objectives
Develop or construct tests

COMMAND POST CONTROLLERS (GPO281). This very small job group is primarily assigned to AFCC (89 percent). Respondents perform an average of 52 tasks and hold DAFSC 302X (67 percent) or DAFSC 3031 (45 percent). They are fairly interested in their jobs, with the tasks listed reflecting the type of job performed:

Operate command post communications equipment
Direct maintenance of command and control communications systems
Conduct command post or battle staff training
Maintain records of command post communications equipment limitations and capabilities
Authenticate or decode messages

AIRBORNE TEAM CHIEFS (GPO388). Respondents in this small job group perform an average of 93 tasks. Eighty-five percent hold duty AFSC 3024 with DAFSC prefix G. The majority (92 percent) are assigned to AFCC. Perceived utilization of talent and training is higher than most other job groups. These incumbents are more satisfied with the sense of accomplishment they receive from their jobs, as well as having a higher level of interest. The tasks below reveal the job of the Airborne Team Chief group:

Advise Airborne Emergency Action Officer (AEAO) on C-E matters
Perform ground alert functions on airborne battle staff
Operate command post communications equipment
Perform crew changeover checklist functions
Perform preflight or postflight inspections of airborne C-E equipment

CONTRACT MANAGERS (GPO038). An average of 55 tasks are performed by members of this job group. These officers hold several AFSCs but 22 percent have duty AFSC prefix C. Most are assigned to AFSC (52 percent) or AFCC (26 percent). Interest and satisfaction are fairly high, while talent and training utilization are average. The tasks below show the type of job performed by officers in the Contract Manager job group:

Draft or write inputs to RFP items, such as CDRLs, SOWs, DIDs, CLINs, or PWSs
Review draft RFPs
Review Statements of Work (SOW) for programs or projects
Develop Request for Proposal (RFP) development plans
Evaluate contract deliverables, such as CDRL items

TACTICAL COMMUNICATION ENGINEERS (GPO121). The average number of tasks performed by this small job group is 108. The primary duty AFSC held by these personnel is DAFSC 305X (92 percent). AFCC has 75 percent of the incumbents assigned. Utilization of talents was rated very low, with job interest and satisfaction average. The tasks below represent the job performed:

Conduct engineering site surveys
Calculate path profiles
Determine site configurations for tactical, exercise, or deployment sites
Participate on site verification teams for deployments
Determine antenna arrangements

PROJECT OR SITE ENGINEERS (GPO095). These respondents perform an average of 80 tasks. Duty AFSC 305X accounts for 97 percent of these officers. Ninety-one percent of the incumbents are assigned to AFCC. Interest and satisfaction are average. The following tasks show the type of job performed:

Conduct engineering site surveys
Draft or write PSLs
Order scheme materials
Compile scheme packages
Identify grounding requirements

SYSTEMS ANALYSTS (GPO063). This job group represents 4 percent of the survey sample, with the respondents performing an average of 78 tasks. Most are assigned to AFCC (82 percent), with 74 percent having duty AFSC prefix C. Job interest and satisfaction are average. The tasks below show the type of job performed by this job group:

Debug computer code
Write computer code
Identify compute software problems
Analyze computer software for modifications
Compile or assemble computer programs

TABLE 5

TIME SPENT PERFORMING TASKS WITHIN DUTIES BY RESPONDENTS IN EACH JOB GROUP

	PERCENT TIME SPENT																
DUTIES	COMM RQMT	CMDRS	CHIEF MAINT LOG	CMCL LSN	INSP	CE SEC INSP	TEL OPS OFCRS	COMM SEC RQMTS	MAINT STAFF	DEPLOY STAFF	SAV SPEC	MGMT	(POM) PLANS AND PRGM	LSD LINE MGR	MAINT CHIEF PRGM MGT	SPVSR	MAINT CHIEF SELF-INSP
COMMAND, MANAGEMENT, AND ADVISORY	17	26	18	22	20	19	20	16	21	15	42	35	24	24	23	27	22
RESOURCE MANAGEMENT	6	12	9	8	5	4	6	4	6	8	4	10	6	3	6	10	2
PERSONNEL	7	16	12	14	7	12	15	10	14	12	11	21	14	13	13	32	11
TRAINING	3	2	3	2	3	3	3	6	3	3	4	2	1	1	2	3	*
INSPECTING AND EVALUATING	3	4	6	2	14	6	5	5	5	4	8	3	*	*	1	3	4
PLANNING AND PROGRAMMING	9	7	3	8	9	2	3	3	2	2	3	5	17	5	7	5	*
SECURITY	5	3	2	1	3	26	12	17	2	2	2	2	2	1	1	2	1
INSTALLATION AND SUPPORT	4	4	4	2	7	1	1	2	3	2	1	2	3	1	3	2	1
OPERATIONS	13	6	4	16	1	10	18	11	4	5	2	3	4	17	2	2	4
LOGISTICS	6	4	26	5	15	2	2	1	26	15	3	3	2	2	15	2	26
ENGINEERING	3	*	1	2	2	*	*	*	*	*	*	*	1	*	*	1	*
TECHNICAL TASKS	3	1	*	4	3	1	1	1	*	*	1	1	3	*	1	2	1
AUTOMATION SYSTEMS	1	*	*	1	*	*	*	*	*	*	*	*	1	*	*	1	*
CONFIGURATION MANAGEMENT/QUALITY ASSURANCE	*	*	*	*	*	*	*	*	*	*	*	*	*	-	*	*	-
TESTING AND EVALUATION	1	*	*	*	*	*	*	-	*	*	1	*	2	-	1	*	1
PROGRAM OR PROJECT MANAGEMENT	3	3	2	2	4	*	1	1	1	*	1	2	8	7	11	1	1
ACQUISITION AND CONTRACTING	2	1	1	5	2	*	1	*	*	*	*	*	3	10	3	1	*
CONTINGENCY, EXERCISE, AND MOBILITY FUNCTIONS	11	7	7	2	2	5	5	15	5	24	4	3	2	3	2	2	17
GENERAL ADMINISTRATIVE TASKS	3	4	4	3	4	7	6	6	6	5	10	6	5	9	7	5	6

* Less than 1 percent
\- No response

TABLE 5 (CONTINUED)

TIME SPENT PERFORMING TASKS WITHIN DUTIES BY RESPONDENTS IN EACH JOB GROUP

	PERCENT TIME SPENT																
DUTIES	CONT EXER MOB MGT	SEC MGR	CE MGR	ACQN AND CONTR	IG INSP	PLANS AND PRGMS	STAFF	LOG SUPPT STAFF	BUDGET	TEST AND EVAL OFCRS	INST	COMM POST CNTRLS	AIRBN TEAM CHIEF	CONTRCT MGR	TAC COMM ENG	PROJ OR SITE ENG	SYS ANLST
COMM'ND, MANAGEMENT, AND ADVISORY	19	15	35	14	15	27	50	13	19	11	15	9	13	11	12	7	6
RESOURCE MANAGEMENT	3	3	6	5	3	4	2	1	35	3	2	*	*	2	*	1	*
PERSONNEL	6	10	22	4	10	3	4	3	5	5	14	2	10	5	1	1	6
TRAINING	3	9	2	1	3	*	1	2	*	1	35	4	12	*	1	*	3
INSPECTING AND EVALUATING	3	4	2	1	24	*	3	2	3	3	4	1	5	1	*	*	*
PLANNING AND PROGRAMMING	7	2	4	17	1	25	12	9	9	4	2	*	1	9	1	5	1
SECURITY	4	25	3	3	2	4	5	4	2	2	3	7	4	1	1	1	2
INSTALLATION AND SUPPORT	1	*	1	9	3	2	*	5	1	3	*	2	*	3	2	17	*
OPERATIONS	11	11	5	4	3	3	2	3	2	4	2	40	28	3	6	4	2
LOGISTICS	2	1	2	2	6	*	*	12	3	3	1	16	6	*	4	*	3
ENGINEERING	*	*	*	4	4	1	*	3	2	8	1	-	*	4	19	40	1
TECHNICAL TASKS	2	1	*	4	4	2	1	8	1	8	1	*	1	4	10	5	2
AUTOMATION SYSTEMS	*	*	*	2	2	*	*	*	3	2	5	*	*	*	1	*	51
CONFIGURATION MANAGEMENT/QUALITY ASSURANCE	*	*	*	2	*	1	*	3	-	2	*	*	*	4	*	*	7
TESTING AND EVALUATION	*	1	*	2	8	1	*	5	*	27	2	-	*	6	3	1	5
PROGRAM OR PROJECT MANAGEMENT	1	*	2	11	*	10	3	11	2	5	*	-	*	8	2	8	1
ACQUISITION AND CONTRACTING	*	*	*	8	*	3	1	8	3	3	*	*	*	33	1	2	1
CONTINGENCY, EXERCISE, AND MOBILITY FUNCTIONS	29	8	4	1	4	1	4	2	3	3	2	9	11	*	27	*	*
GENERAL ADMINISTRATIVE TASKS	7	7	11	5	7	10	11	8	7	4	10	7	8	5	6	4	5

* Less than 1 percent
- No response

TABLE 6

GRADE OF RESPONDENTS IN EACH JOB GROUP

JOB GROUP	GRADE				
	COL	LTC	MAJ	CAPT	LT
COMMUNICATIONS REQUIREMENTS OFFICERS	13	24	16	31	16
COMMANDERS	14	40	14	24	7
CHIEFS OF MAINTENANCE-LOGISTICS	-	6	21	41	32
COMMERCIAL LIAISON SPECIALISTS	-	60	20	20	-
INSPECTORS	-	-	14	29	57
COMMUNICATIONS-ELECTRONIC SECURITY INSPECTORS	-	-	-	45	55
TELECOMMUNICATIONS OPERATIONS OFFICERS	-	-	8	27	65
COMMUNICATIONS SECURITY REQUIREMENTS OFFICERS	-	13	-	25	62
MAINTENANCE STAFF OFFICERS	-	-	7	31	62
DEPLOYMENT STAFF OFFICERS	-	-	4	35	61
STAFF ASSISTANCE VISIT (SAV) SPECIALISTS	3	18	12	37	30
MANAGERS	19	31	26	16	8
PLANS AND PROGRAMS SPECIALISTS	19	51	15	15	-
LEASED LINE MANAGEMENT SPECIALISTS	12	13	25	38	12
MAINTENANCE CHIEFS-PROGRAM MANAGEMENT	11	11	22	45	11
SUPERVISORS	7	29	21	36	7
MAINTENANCE CHIEFS-UNIT SELF-INSPECTION	-	-	50	50	-
CONTINGENCY, EXERCISE, AND MOBILITY MANAGERS	2	19	20	35	24
SECURITY MANAGERS	-	-	-	18	82
COMMUNICATIONS-ELECTRONICS MANAGERS	5	17	24	22	32
ACQUISITION AND CONTRACTING MONITORS	2	7	27	32	32
IG INSPECTORS	2	11	14	34	39
SENIOR PLANS AND PROGRAMS OFFICERS	2	16	26	36	20
STAFF OFFICERS	-	7	30	35	28
LOGISTICS SUPPORT STAFF OFFICERS	-	17	8	33	42
BUDGET SPECIALISTS	-	-	27	18	55
TESTING AND EVALUATION OFFICERS	5	14	18	36	27
INSTRUCTORS	-	9	15	35	41
COMMAND POST CONTROLLERS	-	-	-	44	56
AIRBORNE TEAM CHIEFS	-	8	-	69	23
CONTRACT MANAGERS	-	9	26	35	30
TACTICAL COMMUNICATION ENGINEERS	-	-	-	42	58
PROJECT OR SITE ENGINEERS	-	-	3	18	79
SYSTEMS ANALYSTS	-	-	2	34	64

- No response

TABLE 7

MAJCOM ASSIGNED TO RESPONDENTS IN EACH JOB GROUP

JOB GROUP	PERCENT RESPONDING													
	TAC	AFCC	AFLC	AFSC	ATC	USAFE	ESC	HQ USAF	AFTAC	OV	D3	C2	SPC	OTHER
COMMUNICATIONS REQUIREMENTS OFFICERS	4	62	-	4	2	7	-	2	2	2	4	-	-	11
COMMANDERS	1	88	-	-	-	-	4	-	1	4	1	-	-	1
CHIEFS OF MAINTENANCE-LOGISTICS	6	76	-	1	-	4	9	-	-	-	2	-	1	-
COMMERCIAL LIAISON SPECIALISTS	-	40	-	-	-	-	-	-	-	40	-	-	20	-
INSPECTORS	29	29	-	-	-	-	14	-	14	-	-	-	-	14
COMMUNICATIONS-ELECTRONIC SECURITY INSPECTORS	5	80	-	-	-	-	5	-	-	-	10	-	-	-
TELECOMMUNICATIONS OPERATIONS OFFICERS	-	92	-	2	-	2	2	-	-	-	2	-	-	-
COMMUNICATIONS SECURITY REQUIREMENTS OFFICERS	37	50	-	-	-	12	-	-	-	-	-	-	-	-
MAINTENANCE STAFF OFFICERS	5	69	-	-	-	2	7	-	2	-	5	-	5	2
DEPLOYMENT STAFF OFFICERS	18	57	-	-	-	14	4	-	-	-	-	-	-	-
STAFF ASSISTANCE VISIT (SAV) SPECIALISTS	12	58	-	3	3	3	-	-	2	-	-	-	-	9
MANAGERS	3	76	-	1	3	2	1	2	*	5	1	*	2	2
PLANS AND PROGRAMS SPECIALISTS	5	54	-	3	-	-	3	5	-	12	-	-	3	10
LEASED LINE MANAGEMENT SPECIALISTS	-	63	13	-	-	-	-	-	-	25	-	-	-	-
MAINTENANCE CHIEFS-PROGRAM MANAGEMENT	-	67	11	-	-	-	11	-	-	-	-	-	-	-
SUPERVISORS	7	57	7	-	-	-	7	-	-	21	-	-	-	-
MAINTENANCE CHIEFS-UNIT SELF-INSPECTION	33	33	-	-	-	17	-	-	-	-	-	-	-	-
CONTINGENCY, EXERCISE, AND MOBILITY MANAGERS	3	64	-	*	*	2	*	*	-	4	5	-	*	8
SECURITY MANAGERS	5	74	-	5	3	5	3	-	-	-	-	-	-	-
COMMUNICATIONS-ELECTRONICS MANAGERS	11	56	-	6	-	4	6	-	-	9	6	-	-	4
ACQUISITION AND CONTRACTING MONITORS	5	57	3	4	1	3	2	3	2	6	1	-	*	3
IG INSPECTORS	9	73	-	-	-	-	5	-	-	6	5	-	-	-
SENIOR PLANS AND PROGRAMS OFFICERS	3	41	-	2	*	3	4	21	*	5	2	2	5	3
STAFF OFFICERS	5	49	-	2	-	-	2	9	5	9	5	-	-	5
LOGISTICS SUPPORT STAFF OFFICERS	17	17	17	8	8	-	8	-	-	-	8	-	-	-

TABLE 7 (CONTINUED)

MAJCOM ASSIGNED TO RESPONDENTS IN EACH JOB GROUP

JOB GROUP	PERCENT RESPONDING													
	TAC	AFCC	AFLC	AFSC	ATC	USAFE	ESC	HQ USAF	AFTAC	OV	D3	C2	SPC	OTHER
BUDGET SPECIALISTS	9	36	-	-	-	-	36	9	-	-	-	-	-	-
TESTING AND EVALUATION OFFICERS	14	55	-	5	-	-	5	-	-	-	-	-	5	-
INSTRUCTORS	6	21	-	-	47	3	6	-	3	-	-	-	-	12
COMMAND POST CONTROLLERS	-	89	-	-	-	-	-	-	-	-	-	11	-	-
AIRBORNE TEAM CHIEFS	-	92	-	-	-	-	-	-	-	-	-	-	-	8
CONTRACT MANAGERS	-	26	-	52	-	-	9	-	-	13	-	-	-	-
TACTICAL COMMUNICATION ENGINEERS	-	75	-	17	-	8	-	-	-	-	-	-	-	-
PROJECT OR SITE ENGINEERS	3	91	-	-	-	-	3	-	-	-	-	-	-	-
SYSTEMS ANALYSTS	0	82	3	-	-	2	2	-	-	-	-	-	3	4

* Denotes less than 1 percent

TABLE 8

DUTY AFSCs OF SURVEY RESPONDENTS IN EACH JOB GROUP

JOB GROUP	PERCENT OF EACH JOB GROUP									
	DAFSC 3011	DAFSC 3016	DAFSC 3021	DAFSC 3024	DAFSC 3031	DAFSC 3034	DAFSC 3051	DAFSC 3055	DAFSC 3091	DAFSC 3096
COMMUNICATIONS REQUIREMENTS OFFICERS	4	35	2	23	-	9	-	4	-	23
COMMANDERS	10	44	1	6	1	13	-	4	-	21
CHIEFS OF MAINTENANCE-LOGISTICS	6	33	-	-	11	49	-	1	-	-
COMMERCIAL LIAISON SPECIALISTS	-	20	-	20	-	-	-	20	-	40
INSPECTORS	-	29	-	-	14	57	-	-	-	-
COMMUNICATIONS-ELECTRONICS SECURITY INSPECTORS	-	-	10	75	-	5	-	10	-	-
TELECOMMUNICATIONS OPERATIONS OFFICERS	3	12	30	48	-	7	-	-	-	-
COMMUNICATIONS SECURITY REQUIREMENTS OFFICERS	-	12	13	75	-	-	-	-	-	-
MAINTENANCE STAFF OFFICERS	5	7	-	3	21	62	-	2	-	-
DEPLOYMENT STAFF OFFICERS	-	4	4	21	21	50	-	-	-	-
STAFF ASSISTANCE VISIT (SAV) SPECIALISTS	15	27	-	18	12	12	3	3	-	9
MANAGERS	5	33	2	5	*	9	-	12	4	29
PLANS AND PROGRAMS SPECIALISTS	5	29	-	3	-	-	-	10	7	46
LEASED LINE MANAGEMENT SPECIALISTS	38	12	-	25	-	-	-	-	-	25
MAINTENANCE CHIEFS-PROGRAM MANAGEMENT	11	45	-	-	-	22	-	-	11	11
SUPERVISORS	7	29	-	14	7	14	-	22	-	7
MAINTENANCE CHIEFS-UNIT SELF-INSPECTION	33	17	-	-	17	-	-	-	-	33
CONTINGENCY, EXERCISE, AND MOBILITY MANAGERS	11	31	7	30	3	8	-	5	*	5
SECURITY MANAGERS	-	-	26	58	3	8	5	-	-	-
COMMUNICATIONS-ELECTRONICS MANAGERS	5	28	6	19	11	13	-	5	2	11
ACQUISITION AND CONTRACTING MONITORS	5	24	8	21	7	15	1	15	*	4
IG INSPECTORS	3	16	-	12	2	13	19	31	2	2
SENIOR PLANS AND PROGRAMS OFFICERS	8	29	5	25	3	8	*	17	2	3
STAFF OFFICERS	10	35	5	24	3	7	3	12	-	-
LOGISTICS SUPPORT STAFF OFFICERS	-	25	8	-	17	25	17	8	-	-
BUDGET SPECIALISTS	-	19	27	27	9	9	-	9	-	-
TESTING AND EVALUATION OFFICERS	-	18	-	5	-	-	9	59	-	9
INSTRUCTORS	6	12	9	27	12	12	-	21	-	-
COMMAND POST CONTROLLERS	-	-	22	67	-	11	-	-	-	-

TABLE 8 (CONTINUED)

DUTY AFSCs OF SURVEY RESPONDENTS IN EACH JOB GROUP

JOB GROUP	PERCENT OF EACH JOB GROUP									
	DAFSC 3011	DAFSC 3016	DAFSC 3021	DAFSC 3024	DAFSC 3031	DAFSC 3034	DAFSC 3051	DAFSC 3055	DAFSC 3091	DAFSC 3096
AIRBORNE TEAM CHIEFS	8	8	-	85	-	-	-	-	-	-
CONTRACT MANAGERS	-	22	13	13	9	9	-	30	-	4
TACTICAL COMMUNICATION ENGINEERS	-	-	-	8	-	-	25	67	-	-
PROJECT OR SITE ENGINEERS	-	-	-	-	-	3	38	59	-	-
SYSTEMS ANALYSTS	2	-	22	50	-	12	6	9	-	-

* Denotes less than 1 percent

TABLE 9

AFSC IN EACH JOB GROUP

	PERCENT GROUP																
AFSC	COMM RQMT	CMDRS	CHIEF MAINT LOG	CMCL LSN	INSP	CE SEC INSP	TEL OPS OFCRS	COMM SEC RQMTS	MAINT STAFF	DEPLOY STAFF	SAV SPEC	MGMT	(POM) PLANS AND PRGM	LSD LINE MGR	MAINT CHIEF PRGM MGT	SPVSR	MAINT CHIEF SELF-INSP
301X	4	8	6	*	*	-	2	*	1	*	3	15	3	*	1	1	*
302X	3	1	-	*	-	3	9	1	*	1	1	2	*	*	-	*	-
303X	1	3	14	-	1	*	1	-	10	6	2	6	-	-	*	1	*
305X	*	1	*	*	-	*	-	-	*	-	*	7	1	-	-	1	-
309X	7	10	-	1	-	-	-	-	-	-	2	4	12	1	1	*	1

* Less than 1 percent
- No response

TABLE 9 (CONTINUED)

AFSC IN EACH JOB GROUP

AFSC	PERCENT GROUP																
	CONT EXER MOB MGT	SEC MGR	CE MGR	ACQN AND CONTR	IG INSP	PLANS AND PRGMS	STAFF	LOG SUPPT STAFF	BUDGET	TEST AND EVAL OFCRS	INST	COMM POST CNTRLS	AIRBN TEAM CHIEF	CONTRCT MGR	TAC COMM ENG	PROJ OR SITE ENG	SYS ANLST
301X	10	-	3	9	2	12	3	*	*	*	1	-	*	1	-	-	*
302X	9	6	3	9	2	10	2	*	1	*	2	2	2	1	*	-	10
303X	4	1	4	10	3	6	1	1	*	-	2	*	-	1	-	*	2
305X	2	*	1	8	9	9	2	*	*	4	2	-	-	2	3	10	3
309X	4	-	4	4	1	4	-	-	-	1	-	-	-	*	-	-	-

* Less than 1 percent
- No response

TABLE 10

INDICATORS OF JOB SATISFACTION AMONG JOB GROUP MEMBERS

JOB GROUP	PERCENT RESPONDING					
	JOB INTEREST		UTILIZATION OF TRAINING		SENSE OF ACCOMPLISHMENT	
	INTERESTING	DULL	WELL	NOT WELL	SATISFIED	NOT SATISFIED
COMMUNICATIONS REQUIREMENTS OFFICERS	95	4	62	28	89	9
COMMANDERS	98	-	60	19	95	3
CHIEFS OF MAINTENANCE-LOGISTICS	96	1	56	32	85	13
COMMERCIAL LIAISON SPECIALISTS	60	20	60	20	60	20
INSPECTORS	100	-	43	29	100	-
COMMUNICATIONS-ELECTRONICS SECURITY INSPECTORS	85	10	35	60	75	15
TELECOMMUNICATIONS OPERATIONS OFFICERS	95	2	39	50	85	14
COMMUNICATIONS SECURITY REQUIREMENTS OFFICERS	75	13	25	50	75	-
MAINTENANCE STAFF OFFICERS	86	3	52	38	84	12
DEPLOYMENT STAFF OFFICERS	93	4	50	36	89	11
STAFF ASSISTANCE VISIT (SAV) SPECIALISTS	85	3	21	64	76	15
MANAGERS	87	7	45	37	84	11
PLANS AND PROGRAMS SPECIALISTS	98	-	49	44	85	12
LEASED LINE MANAGEMENT SPECIALISTS	100	-	-	75	75	13
MAINTENANCE CHIEFS-PROGRAM MANAGEMENT	78	11	78	11	67	33
SUPERVISORS	79	7	35	57	64	29
MAINTENANCE CHIEFS-UNIT SELF-INSPECTION	100	-	67	17	100	-
CONTINGENCY, EXERCISE, AND MOBILITY MANAGERS	90	4	37	46	78	16
SECURITY MANAGERS	79	8	19	74	71	21
COMMUNICATIONS-ELECTRONICS MANAGERS	69	15	26	65	58	30
ACQUISITION AND CONTRACTING MONITORS	88	3	38	46	80	17
IG INSPECTORS	88	6	27	53	74	19
SENIOR PLANS AND PROGRAMS OFFICERS	87	6	22	60	74	20
STAFF OFFICERS	65	12	21	68	63	21
LOGISTICS SUPPORT STAFF OFFICERS	58	42	-	84	50	25
BUDGET SPECIALISTS	46	36	9	82	54	46
TESTING AND EVALUATION OFFICERS	91	5	50	32	78	18
INSTRUCTORS	82	6	29	63	85	9

TABLE 10 (CONTINUED)

INDICATORS OF JOB SATISFACTION AMONG JOB GROUP MEMBERS

JOB GROUP	PERCENT RESPONDING					
	JOB INTEREST		UTILIZATION OF TRAINING		SENSE OF ACCOMPLISHMENT	
	INTERESTING	DULL	WELL	NOT WELL	SATISFIED	NOT SATISFIED
COMMAND POST CONTROLLERS	78	11	56	44	44	44
AIRBORNE TEAM CHIEFS	100	-	46	54	100	-
CONTRACT MANAGERS	87	4	34	43	78	9
TACTICAL COMMUNICATION ENGINEERS	92	8	42	50	75	17
PROJECT OR SITE ENGINEERS	88	12	18	73	79	21
SYSTEMS ANALYSTS	87	9	41	38	74	24

- No response

TABLE 11

AVERAGE NUMBER OF TASKS PERFORMED, PEOPLE SUPERVISED, AND SPAN OF CONTROL FOR RESPONDENTS IN EACH JOB GROUP

JOB GROUP	SPAN OF CONTROL	PEOPLE SUPERVISED	AVERAGE NUMBER OF TASKS PERFORMED
COMMUNICATIONS REQUIREMENTS OFFICERS	121	6	445
COMMANDERS	205	7	220
CHIEFS OF MAINTENANCE-LOGISTICS	121	10	249
COMMERCIAL LIAISON SPECIALISTS	39	6	188
INSPECTORS	9	3	211
COMMUNICATIONS-ELECTRONICS SECURITY INSPECTORS	28	4	105
TELECOMMUNICATIONS OPERATIONS OFFICERS	60	5	175
COMMUNICATIONS SECURITY REQUIREMENTS OFFICERS	7	3	208
MAINTENANCE STAFF OFFICERS	66	7	122
DEPLOYMENT STAFF OFFICERS	51	5	151
STAFF ASSISTANCE VISIT (SAV) SPECIALISTS	19	5	85
MANAGERS	113	7	106
PLANS AND PROGRAMS SPECIALISTS	44	5	131
LEASED LINE MANAGEMENT SPECIALISTS	72	5	79
MAINTENANCE CHIEFS-PROGRAM MANAGEMENT	25	5	101
SUPERVISORS	32	6	61
MAINTENANCE CHIEFS-UNIT SELF-INSPECTION	29	5	93
CONTINGENCY, EXERCISE, AND MOBILITY MANAGERS	23	4	126
SECURITY MANAGERS	31	4	93
COMMUNICATIONS-ELECTRONICS MANAGERS	50	4	45
ACQUISITION AND CONTRACTING MONITORS	14	4	176
IG INSPECTORS	10	4	81
SENIOR PLANS AND PROGRAMS OFFICERS	5	3	72
STAFF OFFICERS	17	2	38
LOGISTICS SUPPORT STAFF OFFICERS	3	2	68
BUDGET SPECIALISTS	8	3	66
TESTING AND EVALUATION OFFICERS	41	4	169
INSTRUCTORS	17	5	51
COMMAND POST CONTROLLERS	9	-	52
AIRBORNE TEAM CHIEFS	14	4	93
CONTRACT MANAGERS	6	3	55
TACTICAL COMMUNICATION ENGINEERS	19	3	108
PROJECT OR SITE ENGINEERS	2	2	80
SYSTEMS ANALYSTS	6	2	78

Summary

The jobs described above fit a pattern of functions that may be used to consolidate the 34 job groups. There are six functions which summarize the job groups:

Management and Staff
Planning, Programming, and Acquisition
Operations
Maintenance
Security and Inspections
Miscellaneous

The job groups are allocated among these functions as shown in Tables 12 through 18. Tables 19 and 20 show the distribution of specialties and grade across the functions.

The jobs and functions generally fit the pattern prescribed by AFR 36-1, but the personnel in each of the jobs and functions do not necessarily possess the specialty or grade appropriate to the functional aspect of their job. As Tables 19 and 20 illustrate, there are approximately the same percentage of Systems Officers (AFSC 3024) as Directors (AFSC 3096) performing planning, programming, and acquisition types of jobs; and there are the same percentage of colonels as lieutenants performing operations types of jobs. Additionally, the AFR 36-1 prescribed pattern does not reflect the level of involvement by Communication-Electronics Officers in planning, programming, and acquisition jobs--there is one sentence in the AFR 36-1 description for Systems Officers reflecting contracting functions and no specific mention of acquisition jobs or activities in any specialty description.

TABLE 12

FUNCTIONAL GROUPS

FUNCTIONS	PERCENT OF SAMPLE
MANAGEMENT AND STAFF	21
PLANNING, PROGRAMMING, AND ACQUISITION	20
OPERATIONS	10
MAINTENANCE	7
SECURITY AND INSPECTIONS	7
MISCELLANEOUS	15

TABLE 13

JOBS IN THE MANAGEMENT AND STAFF FUNCTION

JOBS	PERCENT OF SAMPLE
MANAGERS	10
COMMANDERS	4
C-E MANAGERS	2
STAFF OFFICERS-GENERAL	2
STAFF ASSISTANCE OFFICERS	2
DEPLOYMENT STAFF OFFICERS	1
LOGISTICS STAFF OFFICERS	*
SUPERVISORS	*

* Less than 1 percent

TABLE 14

JOBS IN THE PLANNING, PROGRAMMING, AND ACQUISITIONS FUNCTION

JOBS	PERCENT OF SAMPLE
PLANS AND PROGRAMS SPECIALISTS	9
ACQUISITION AND CONTRACT MONITORS	8
SENIOR PLANS AND PROGRAMS OFFICERS	2
CONTRACT MANAGERS	1
BUDGET SPECIALISTS	*

* Less than 1 percent

TABLE 15

JOBS IN THE OPERATIONS FUNCTION

JOBS	PERCENT OF SAMPLE
COMMUNICATIONS REQUIREMENTS OFFICERS	3
TELECOMMUNICATIONS OPERATIONS OFFICERS	3
COMMERCIAL LIAISON OFFICERS	*
LEASED LINE MANAGERS	*
COMMAND POST CONTROLLERS	*
AIRBORNE TEAM CHIEFS	*

* Less than 1 percent

TABLE 16

JOBS IN THE MAINTENANCE FUNCTION

JOBS	PERCENT OF SAMPLE
CHIEFS OF MAINTENANCE - LOGISTICS	4
MAINTENANCE STAFF OFFICERS	2
MAINTENANCE CHIEFS - PROGRAM MANAGEMENT	*
MAINTENANCE CHIEFS - UNIT SELF-INSPECTION	*

* Less than 1 percent

TABLE 17

JOBS IN THE SECURITY AND INSPECTIONS FUNCTION

JOBS	PERCENT OF SAMPLE
IG INSPECTORS	3
SECURITY MANAGERS	2
C-E SECURITY INSPECTORS	1
INSPECTORS	*
COMMUNICATIONS SECURITY REQUIREMENTS SPECIALISTS	*

* Less than 1 percent

TABLE 18

MISCELLANEOUS JOBS

JOBS	PERCENT OF SAMPLE
CONTINGENCY, EXERCISE, AND MOBILITY MANAGERS	7
SYSTEMS ANALYSTS	4
PROJECT OR SITE ENGINEERS	2
INSTRUCTORS	1
TEST AND EVALUATION OFFICERS	1
TACTICAL COMMUNICATIONS ENGINEERS	*

* Less than 1 percent

TABLE 19

SPECIALTY BY FUNCTION

FUNCTIONS	PERCENT				
	301X	302X	303X	305X	309X
MANAGEMENT AND STAFF	28	22	24	15	21
PLANNING, PROGRAMMING, AND ACQUISITIONS	26	22	18	21	21
OPERATIONS	8	7	3	3	9
MAINTENANCE	9	0	25	0	2
SECURITY AND INSPECTIONS	9	7	5	11	1
MISCELLANEOUS	12	22	8	22	5

TABLE 20

GRADE BY FUNCTION

FUNCTIONS	PERCENT				
	LT	CAPT	MAJ	LTC	COL
MANAGEMENT AND STAFF	14	19	31	43	63
PLANNING, PROGRAMMING, AND ACQUISITION	15	21	29	22	15
OPERATIONS	9	10	5	7	9
MAINTENANCE	9	9	8	2	1
SECURITY AND INSPECTIONS	13	8	4	4	1
MISCELLANEOUS	18	16	10	11	4

SPECIALTY ANALYSIS

The purpose of this section is to describe the tasks performed by officers based on the existing classification structure. In addition, background information on personnel in the different specialties will be reported and a comparison of the duties and responsibilities from AFR 36-1 to the tasks personnel perform will be presented.

Communications-Electronics Systems Officers - AFSC 3024. The survey sample included 516 respondents with a duty AFSC of 302X. The majority of these officers were company grade officers (57 percent were lieutenants and 41 percent were captains). The largest percentage were assigned to AFCC (74 percent) and provided support to a variety of major commands (21 percent support SAC, 19 percent support AFCC, 14 percent support TAC, and 11 percent support USAFE). These respondents had an average of 14 months in their current jobs and an average of slightly more than 7 years total service time. Most of these officers held undergraduate degrees in the areas of mathematics (28 percent), business (16 percent), or psychology (10 percent). Approximately 35 percent had graduate degrees, the majority specializing in business (10 percent) or systems management (4 percent). The Systems Officers performed an average of 108 tasks, directly supervised 3 people, and managed an average of 22 personnel. From the list of Air Force communications-electronics courses presented in the job inventory, the Systems Officers indicated attending the Systems Officer Course (42 percent), Maintenance Officer Course (21 percent), and the C-E Computer Programming Course (20 percent).

Review of the computer-generated job description for the Systems Officers revealed the largest percentage of their job time was spent performing command, management, advisory, and operations functions. The tasks listed below are examples of the tasks typically performed by Systems Officers:

Coordinate with users on communications requirements
Provide guidance on C-E matters, such as capabilities, limitations, or requirements
Obtain staff coordinations on program or project actions
Advise on or interpret publications, procedures, or policies
Brief or orient new personnel

Comparison of the total computer-generated job description to the AFR 36-1 summary of duties and responsibilities revealed some inconsistencies. The emphasis in the specialty description relates to a technical operations management function, while the computer-generated job description reflects a highly diverse collection of functions ranging from communications operations management to security concerns to command personnel issues. The survey

data indicates general agreement between the AFR 36-1 summary and the survey findings, but the summary does not capture the diversity of jobs performed by Systems Officers.

Communications-Electronics Maintenance Officers - AFSC 3034. There were 355 respondents to the survey with a duty AFSC of 303X. The majority of these personnel were assigned to AFCC (66 percent) and provided support to AFCC (20 percent), TAC (13 percent), SAC (11 percent), and USAFE (10 percent). Most of these respondents were company grade officers, 54 percent were lieutenants and 45 percent were captains, who average 14 months in their present jobs and slightly more than 9 years total service time. The Maintenance Officers performed an average of 137 tasks, reported direct supervision of 6 subordinates, and a management span of 43 personnel. Most had undergraduate degrees in mathematics (27 percent), business (22 percent), education (12 percent), or psychology (12 percent). Approximately 32 percent had completed graduate degrees, with specialization in business (7 percent) or systems management (3 percent). From the list of Air Force courses in the job inventory, the Maintenance Officers reported attendance at the Maintenance Officer Course (51 percent), the Systems Officer Course (19 percent), the Tempest Officer Course (13 percent), and the Electronic Systems Officer Course (10 percent).

Examining the computer-generated job description for the Maintenance Officers indicated the majority of job time was spent performing command, management, advisory, logistics, and personnel functions. Review of the task responses confirmed the managerial and supervisory nature of the jobs performed by these personnel. There were no technical communications maintenance tasks performed by as many as one-half of the Maintenance Officer respondents. The tasks listed below illustrate the type of jobs performed by individuals with a duty AFSC of 3034:

Draft or write airman performance reports
Conduct unit, work center, or facility walk-through visits
Approve or disapprove leave requests or passes
Consolidate inputs to publications, procedures, or policies
Conduct follow-up on inspection or evaluation report discrepancies

Comparison of the survey responses to the AFR 36-1 Specialty Description indicated some differences in the implication in the AFR 36-1 summary of a highly technical maintenance management function and the tasks performed by the survey respondents. The survey data reflect an orientation toward a personnel management job for the majority of respondents, with smaller percentages involved in the actual maintenance management functions.

Communications-Electronics Engineers - AFSC 3055. There were 338 survey respondents with a duty AFSC of 305X. The majority of these individuals were assigned to AFCC (61 percent) and provided support to AFCC (36 percent) and AFSC (11 percent). Although the majority of these officers

were captains (33 percent) or lieutenants (43 percent), the specialty also included a substantial percentage of majors (19 percent). The Engineers performed an average of 98 tasks, the smallest average among the communications-electronics specialties. These respondents reported supervising an average of 4 subordinates, with an average management span of 20 personnel. The Engineers indicated an average of 17 months in their current jobs, with slightly more than 11 years total service time. The majority reported undergraduate degrees in electrical engineering (71 percent) or electrical engineering technology (21 percent). Approximately one-half of the Engineers indicated completion of a graduate degree, with specialization in electrical engineering (19 percent), business (10 percent), or systems management (6 percent). From the list of Air Force courses in the job inventory, 49 percent of the Engineers indicated having attended the Engineer Course.

A review of the computer-generated job description for the Engineer respondents revealed the largest proportion of their job time was spent performing command, management, advisory, engineering, planning, and programming functions. The task response data, however, indicated no technically-related job performed by more than 10 percent of the Engineers and no technically-related task performed by as many as 40 percent of all of the Engineers. The tasks performed by large percentages of these respondents related to management and advisory functions. The tasks which illustrate the technical type of functions performed by Engineers are listed below (however, less than 30 percent of the Engineers as a group perform any one of these tasks):

Review Statements of Work (SOW) for programs or projects
Participate in test and evaluations, such as DT&Es, OT&Es, IOT&Es, FOT&Es, or JOT&Es
Conduct engineering site surveys
Interpret user communications requirements
Develop inputs to test plans, procedures, or criteria

Comparison of the survey responses from Engineers with the AFR 36-1 Specialty Description indicated a general pattern of agreement. The functions listed in the specialty description were performed by some Engineers, but as a group, there were very few respondents performing any one function. The incompatability seems to be in the implication that Engineers perform all of the listed functions when, in fact, they will normally perform only one of these activities at a time, and across a number of assignments will probably encounter only a limited number of the total.

Communications-Electronics Staff Officer - AFSC 3016. The survey sample included 543 personnel with a duty AFSC of 301X. The majority were assigned to AFCC and provided primary support for a wide variety of major commands (AFCC-13 percent, TAC-10 percent, SAC-9 percent, and HQ USAF-8 percent). The majority were staff-level officers, 45 percent majors and 31 percent lieutenant colonels, who had been in their current jobs for an

average of 16 months and on active duty for approximately 16 years. The Staff Officers reported directly supervising an average of 6 subordinates and a management span of 86 personnel. The majority indicated undergraduate specialization in the areas of mathematics (32 percent), business (15 percent), or chemistry or education (9 percent each). Approximately 80 percent reported completing graduate degrees, with majors in business (34 percent), telecommunications management (10 percent), or systems management (10 percent).

Examining the computer-generated job description for the Staff Officer revealed approximately one-half of their job time was accounted for by command, management, advisory, personnel, planning, and programming functions. Review of the task responses confirmed the managerial nature of the jobs, there were no technical tasks performed by as many as one-half of the Staff Officer respondents. The tasks listed below illustrate the functions performed:

Evaluate publications, procedures, or policies
Counsel personnel on personal or military-related problems
Assign personnel to duty positions or additional duties
Conduct staff meetings
Coordinate with users on communications requirements

Comparison of the survey responses for the Staff Officers with the AFR 36-1 Specialty Description indicated substantial agreement. The array of duties and responsibilities in the summary reflect the variety of jobs and tasks performed by officers with a duty AFSC of 3016.

Communications-Electronics Directors - AFSC 3096. The survey sample included 181 respondents from the Director specialty. The majority of these officers were lieutenant colonels (46 percent) or colonels (45 percent), the majority of whom were assigned to AFCC. The jobs these personnel perform provide direct support for a variety of major commands (AFCC-16 percent, USAFE-9 percent, TAC-7 percent, and SAC-7 percent). These personnel averaged 15 months in their current jobs and approximately 20 years total service time. The Directors performed an average of 139 tasks, had an average of 7 subordinates, and a management span of 145 personnel. Review of the educational backgrounds of these officers revealed the majority had undergraduate majors in mathematics (18 percent), electrical engineering (13 percent), business (13 percent), or education (12 percent). In addition, 84 percent reported completing a graduate program, with specialization in business (34 percent), systems management (9 percent) or logistics management (8 percent). Review of the Air Force-offered courses listed in the job inventory indicated approximately one-half of the Directors had completed the Telecommunications Systems Staff Officer Course.

Review of the computer-generated job description for the Directors indicated the majority of job time spent performing command, management, advisory, personnel, planning, and programming functions. The task response confirmed the management nature of the jobs, with the tasks listed below illustrating the type of jobs performed:

Assign projects to personnel for staffing actions
Evaluate or approve briefings
Develop unit goals or objectives
Draft or write civilian performance appraisals, such as JPAS or CPAS appraisals
Identify current trends that affect future communications

Comparison of the survey responses from Directors to the AFR 36-1 Specialty Summary indicated substantial agreement between what is generally expected of senior managers and the jobs and tasks those personnel actually perform.

Summary

Survey responses were examined within each of the specialties comprising the Communications-Electronics Officer utilization field. Viewed as an entity, the utilization field appears to be a reasonably well organized collection of diverse specialties. The five specialties describe in a very broad manner the jobs performed across the areas for which Communications-Electronics Officers have responsibility. There is, however, little relationship between an individual's duty AFSC and the job that individual performs. The primary area needing review relates to the variety of jobs performed by personnel in each of the specialties.

BACKGROUND INFORMATION

The purpose of this section is to present data on selected items of background information across the communications-electronics specialties. The information contained in the following tables is generally self-explanatory.

TABLE 21

MAJOR COMMAND PRIMARILY SUPPORTED

	PERCENT RESPONDING				
COMMAND	301X	302X	303X	305X	309X
AFCC	13	19	20	36	16
TAC	10	14	13	6	7
SAC	9	21	11	2	7
HQ USAF	8	3	1	2	4
NATO	5	1	2	1	3
DCA	4	1	1	7	5
AFSC	3	4	4	11	2
ESC	3	2	5	4	3
MAC	4	4	5	1	4
OTHERS	41	31	38	31	49

TABLE 22

JOB INTEREST

	PERCENT RESPONDING				
	301X	302X	303X	305X	309X
INTERESTING	92	83	86	85	93
NEUTRAL	4	9	8	7	3
DULL	4	8	6	8	4

TABLE 23

JOB UTILIZES TRAINING

	PERCENT RESPONDING				
	301X	302X	303X	305X	309X
FAIRLY WELL OR BETTER	79	65	73	67	85
VERY LITTLE OR NOT AT ALL	21	35	27	33	15

TABLE 24

ORGANIZATIONAL LEVEL OF PRESENT JOB

	PERCENT RESPONDING				
	301X	302X	303X	305X	309X
UNIT OR SQUADRON	15	27	32	18	5
GROUP	13	16	24	22	16
WING OR BASE	3	6	5	3	1
INTERMEDIATE OR NAF	10	13	8	7	9
COMMAND SPECIAL ACTIVITY	11	16	12	19	20
COMMAND HEADQUARTERS	19	15	16	16	25
HEADQUARTERS AIR FORCE	10	3	1	2	6
DEPARTMENTAL OR JOINT	17	3	1	10	15
OTHER	2	1	1	3	3

TABLE 25

CAREER FIELD PLANS

	PERCENT RESPONDING				
	301X	302X	303X	305X	309X
STAY IN 30XX	84	49	60	52	93
CROSS TRAIN OUT	2	7	5	10	2
CROSS TRAIN AND RETURN	5	18	12	14	0
UNDECIDED	4	17	18	16	2
SEPARATE	1	7	4	5	0
OTHER	4	2	1	3	3

TABLE 26

VALUE OF DIGITAL SYSTEMS OR TECHNIQUES TRAINING

	PERCENT PERFORMING				
	301X	302X	303X	305X	309X
NONE	4	6	6	3	2
MINIMAL VALUE	2	1	5	1	2
VERY SMALL VALUE	2	3	3	2	1
SMALL VALUE	4	7	8	4	2
MODERATE VALUE	14	15	16	13	14
LARGE VALUE	25	23	21	17	25
VERY LARGE VALUE	18	12	10	19	16
MAXIMAL VALUE	11	12	8	23	16
OTHER (NO OPINION)	20	21	23	18	22

TABLE 27

UNDERGRADUATE MAJOR MOST BENEFICIAL

	PERCENT RESPONDING				
	301X	302X	303X	305X	309X
ACQUISITION LOGISTICS MANAGEMENT	15	10	13	10	12
BUSINESS	19	20	24	12	24
COMPUTER SCIENCE	14	24	10	11	17
COMPUTER TECHNOLOGY	11	16	7	5	12
COMPUTER TECHNOLOGY (ELEC. ENGINEER.)	9	10	5	15	9
ELECTRICAL ENGINEERING	14	12	12	46	24
ELECTRICAL ENGINEERING TECHNOLOGY	6	7	12	17	7
ELECTRONIC TECHNOLOGY	15	12	23	13	13
ENGINEERING (AERO, ASTRO, MECH)	2	3	3	3	2
LOGISTICS MANAGEMENT	14	5	20	5	14
MATHEMATICS	3	5	3	3	2
SPACE OPERATIONS	4	4	3	4	3
SYSTEMS MANAGEMENT	23	24	21	20	25
SYSTEMS OPERATION	7	9	5	5	4
SYSTEMS TECHNOLOGY	7	10	5	7	5
TELECOMMUNICATIONS MANAGEMENT	48	50	42	21	50

TABLE 28

JOB INTEREST FOR LIEUTENANTS

	PERCENT RESPONDING		
	302X	303X	305X
INTERESTING	82	88	84
NEUTRAL	9	6	7
DULL	9	6	9

TABLE 29

JOB UTILIZES TRAINING FOR LIEUTENANTS

	PERCENT RESPONDING		
	302X	303X	305X
FAIRLY WELL OR BETTER	41	50	37
VERY LITTLE OR NOT AT ALL	59	50	63

TABLE 30

CAREER FIELD PLANS FOR LIEUTENANTS

	PERCENT RESPONDING		
	302X	303X	305X
STAY IN 30XX	43	56	31
CROSS TRAIN OUT	8	5	15
CROSS TRAIN AND RETURN	21	14	22
UNDECIDED	19	20	22
SEPARATE	7	4	8
OTHER	2	1	2

TRAINING ASSESSMENT

The objective of this section of the survey report is to compare entry-level training and the tasks performed by junior Communications-Electronics Officers. For an effective personnel management system, the entry-level training program should prepare personnel to become effective performers on the job without clouding the individual's perspective of that job with unnecessary or unuseable information.

To determine the relevance of training to the jobs performed, members of the 3395 Technical Training Group, 3300 Technical Training Wing, Keesler Technical Training Center, matched tasks from the AFSC 30XX job inventory to the plan of instruction (POI) objectives for the primary entry-level course--Communications-Electronics Systems Officer, E3OBR3021. Survey data (the training emphasis ratings and the percentage of incumbents performing each task) were then added to the task and POI objective matched list. Review of this combination of information allows an assessment of the relevance of training to the jobs performed.

For the tasks rated by the Systems Officers, the average training emphasis ratings was .82, with those tasks rated 2.85 or higher substantially above average in training emphasis. For the tasks rated by the Maintenance Officers, the average training emphasis ratings was .76, with those tasks rated 2.57 or higher substantially above average in training emphasis.

Given that both the Systems and Maintenance Officers attend the same entry-level training course, the training emphasis ratings were combined to allow a review based on the average rating across the two specialties. The combined average training emphasis ratings was .81, with a rating of 2.73 being substantially above average. When used in conjunction with other information, training emphasis ratings provide insight into training requirements.

The Communications-Electronics Systems Officer Course is 31 weeks long, divided into 30 blocks of instruction.

a. The first two blocks of instruction are introductory and encompass 40 hours related to C-E staff structure.

b. Blocks 3 through 23 are an amalgamation of electronics theory and communications background that are not supported by job performance data. There are many blocks in instruction that have no tasks referenced to them and other blocks of instruction with tasks referenced that are performed by very small percentages of either Systems or Maintenance Officers and have very low training emphasis ratings.

c. Blocks 24 and 25 relate to communications security and resources management and appear to be well supported by both the percentage of officers performing tasks referenced to the objectives and the training emphasis ratings given to the tasks.

d. Block 26 concerns air traffic service management and has no tasks referenced that justify the 38 hours of course time.

e. Block 27 relates to program management and is supported by a substantial number of tasks performed by relatively large numbers of respondents.

f. Blocks 28 and 29 cover maintenance management and operations management. Each is well supported by survey data in terms of the percentage of lieutenants performing the tasks referenced to each block of instruction, however, an interesting point is the relatively high training emphasis ratings given to some of the maintenance tasks by Systems Officers. The indication seems to be that each of the entry-level ladder incumbents should have some knowledge of the functions performed by personnel in the other specialty. The question to be examined relates to the level or depth of that knowledge. Do the members of each ladder need to know the same amount of information about each others jobs to necessitate completion of the same training program?

g. Block 30 covers independent study and while the objectives appear well supported by the survey data, the question arises as to the necessity of 54 hours of course time devoted to typewritten staff work.

In addition to the tasks referenced to the training objectives, there were many tasks not referenced to any part of the POI. The task list was designed to describe all of the tasks any Communications-Electronics Officer, regardless of grade or specialty, might perform. Therefore, the task list included a wide variety of tasks not appropriate for inclusion in the training program for any number of reasons. Among these tasks not referenced to any block of the POI are some that appear to warrant review for possible inclusion in any revision of the training plan. Table 31 lists examples of the tasks that might be included in a revised training plan.

TABLE 31

EXAMPLES OF TASKS NOT REFERENCED TO THE PLAN OF INSTRUCTION

TASKS NOT REFERENCED	PERCENT PERFORMING AFS 302X LT	PERCENT PERFORMING AFS 303X LT
DRAFT OR WRITE AIRMAN PERFORMANCE REPORTS (APR)	58	66
CONSOLIDATE INPUTS TO PUBLICATIONS, PROCEDURES, OR POLICIES	44	56
MAINTAIN CLASSIFIED SAFES OR CABINETS	48	29
CONDUCT UNIT SELF-INSPECTIONS	51	59
INVESTIGATE SECURITY VIOLATIONS OR COMPROMISES	41	35

Tasks were also matched by personnel from the 3395 Technical Training Group, 3300 Technical Training Wing, Keesler Technical Training Center, to the POI for the Communications-Electronics Engineers, POI E3OBR3051, dated April 1983. The Engineer Course represents a subset of the longer systems course, encompassing five blocks of instruction.

a. The first two blocks of instruction relate to orientation and the C-E staff structure and require 40 hours of course time. There were no tasks performed by as many as 20 percent of the engineers referenced to these two blocks of instruction.

b. The third block of instruction covers C-E programs for 72 hours of instruction. There were two tasks referenced to these 72 hours of instruction performed by as many as 25 percent of engineer lieutenants (the target population for the entry-level course). The two tasks relate to interpretation and evaluation of publications.

c. The fourth block concerns maintenance management (62 hours of instruction). There was one task referenced to this block of instruction performed by more than one-third of the target population. The task concerns guidance on C-E capabilities, limitations, or requirements.

d. The fifth block provides 48 hours of operations management instruction. There were no tasks performed by more than one-fourth of the target population matched to this block.

Review of the tasks not referenced to any block of the course revealed a range of management tasks performed by more than 25 percent of the engineer lieutenants that should be reviewed for possible inclusion in a revised entry-level course for Communications-Electronics Engineers.

Summary

The comparison of POI objectives to occupational survey data indicated the entry-level communications-electronics officer courses require modification. The modification should be accomplished with an awareness of the jobs course graduates will be expected to perform and the educational background of the students.

Review of the responses to a background question regarding what undergraduate area of specialization would be most beneficial to the incumbent accomplishing their current job did not yield a consensus. The areas of specialization selected by most personnel in the entry-level specialties were:

For AFS 302X--Telecommunications Management (50 percent)
Systems Management (24 percent)
Computer Science (24 percent)

For AFS 303X--Telecommunications Management (42 percent)
Business (21 percent)

For AFS 305X--Electrical Engineering (46 percent)

Review of the occupational survey job structure analysis revealed that personnel in the entry-level specialties perform a wide variety of jobs. For the Systems Officers there are 5 jobs which account for approximately 50 percent of the respondents:

Systems Analysts
Plans and Programs Officers
Acquisition and Contract Monitors
Contingency, Exercise, and Mobility Managers
Telecommunications Operations Officers

For the Maintenance Officers, 3 jobs account for approximately 35 percent of the respondents:

Maintenance Chiefs
Maintenance Staff Officers
Acquisition and Contract Monitors

For the Engineers, 3 jobs account for approximately 30 percent of the respondents:

Site Engineers
Plans and Programs Officers
Inspectors

This information argues for entry-level training programs to prepare Systems and Maintenance Officers to perform management functions with differing areas of specialization. A common core of training in AF management practices (both personnel and technical) and exposure to such subject areas as planning, programming, and monitoring of acquisition and contract functions appears necessary. Additional training may be necessary to address the specifics for which the specialties were designed--telecommunications operations and contingency matters for Systems Officers and maintenance concepts, practices, and management for Maintenance Officers. For the Engineers, technical training should address the AF use of engineering personnel--technical management.

COMPARISON TO PREVIOUS SURVEY

In 1975, an occupational survey of the Communications-Electronics specialties was completed. The findings were based on responses from 2,339 officers in 8 specialties. Comparison of the findings from that survey to the present survey revealed:

A. The job structure for Communications-Electronics Officers has changed little over the intervening years. The six functions used to categorize the 1984 job structure is similar to the functions described in 1975. Table 32 illustrates the functions, with the percentages of respondents from each survey in each category.

TABLE 32

COMPARISON OF JOB STRUCTURE FINDINGS

	PERCENT OF SAMPLE	
FUNCTION	1975	1984
MANAGEMENT AND STAFF	34	21
PLANNING, PROGRAMMING, AND ACQUISITIONS	3	20
OPERATIONS	12	10
MAINTENANCE	16	7
SECURITY AND INSPECTIONS	4	7
MISCELLANEOUS	10	15

Some of the shifts in jobs that have occurred over the 10 years between surveys are: (a) The increase in the percentage of personnel performing the planning, programming, and acquisitions types of jobs, and (b) a decrease in the percentage of personnel performing management- and maintenance-related jobs.

A major finding that has remained consistent across the two surveys is the crossover of specialties among the jobs. In both surveys, large percentages of personnel are performing jobs with a duty AFSC designated for another job.

B. In 1975, the assessment of training indicated that Systems and Maintenance Officer courses needed modification in the type and amount of electronics principles training given to entry-level officers. This finding has not changed over the intervening 10 years. The 1984 survey indicates a need to review the electronics principles blocks of instruction. While there can be no argument that technical management personnel, which the Systems

and Maintenance Officers certainly are, need some exposure to and a basic understanding of the subject-matter over which they exercise management control. The issue is the breadth and depth of that exposure. The Engineering Officer course has been changed since 1975. The changes, however, have not improved the relevance of training to the jobs the Engineers perform.

C. Review of the background responses revealed some changes in the respondents perceptions of their jobs and the associated training. The responses to the job interest item indicated an 8 to 10 percent increase in those lieutenants who found their jobs interesting. Responses to the utilization of training item revealed a decline of 15 to 20 percent in those lieutenants who reported their jobs utilized their training at least fairly well.

SUMMARY

Analysis of occupational survey data from Communications-Electronics Officers resulted in the description of a variety of jobs performed by incumbents. The present classification structure approximates the types of jobs personnel perform but does not serve as a descriptor of the job an individual performs. There is extensive crossover among the specialties with regard to jobs performed. Incumbents do not always hold the AFSC consistent with the requirements of their jobs.

The job structure analysis identified 34 different jobs, many of which cross existing specialty delineations. These 34 jobs were grouped together to form six broadly defined functional categories--management and staff; planning, programming, and acquisition; operations; maintenance; security and inspections; and a miscellaneous category which includes jobs related to systems analysis and engineering functions. There were no jobs or categories of jobs performed by personnel with only one specialty.

For the entry-level specialties, duty AFSCs 302X, 303X, and 305X, there was a reasonable relationship between the specialty descriptions contained in AFR 36-1 and the categories of jobs. Areas in need of review relate to the variety of jobs personnel perform across the specialty definitions.

There was general satisfaction by Communications-Electronics Officers with their jobs and their career field plans were positive. Review of the perception of how well their jobs utilize training given indicated the lieutenants did not have a positive response to the question regarding utilization of training, with 50 percent or more from each of the entry-level specialties reporting very little to no utilization of training in their jobs.

There are two major conclusions from these findings:

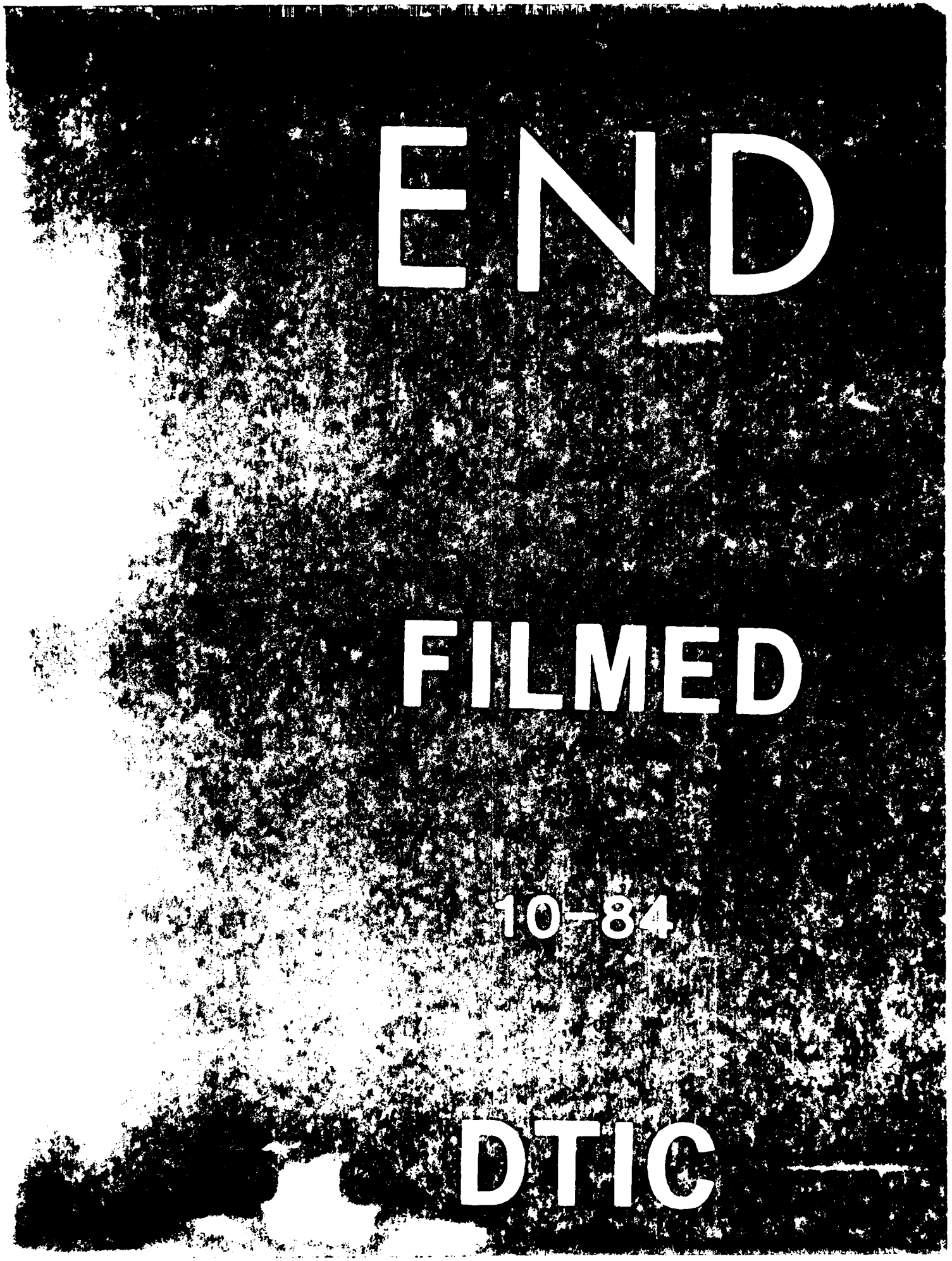
A. There is a need to modify the classification structure to more completely describe the jobs personnel perform. Following a change in the classification structure, personnel must be utilized in a manner that allows the individual's job and specialty to match.

B. The entry-level training requires modification to better prepare junior officers to perform the jobs they will be assigned. A primary question to be examined is the amount and depth of electronics fundamentals training to be presented. No training program can be expected to efficiently provide for all of the jobs and tasks Communications-Electronics Officers perform. The use of a variety of approaches, such as specialized tracks in an entry-level course, automated exportable training packages, and on-the-job training, offer the opportunity to efficiently prepare officers to perform their jobs and tasks.

There are two primary implications for personnel management that can be drawn from all of the preceeding discussion:

A. Career progression is unsystematic. While individual officers may follow a path that broadens their experience and prepares them for future jobs, there is no systematic means of assuring that all officers get the experience and broadening essential for future jobs.

B. Training and development is, as a result, both difficult to provide and inconsistent. The net result is that some, perhaps many, officers find themselves in jobs for which they have received little preparation. In these instances both the individual officers as well as the mission may be less productive.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